WHAT IS CLAIMED IS:

1. A method of preparing a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the method comprising:

preparing a first mixture of a synthetic asphalt-recycled tire rubber base by mixing together gilsonite in a tall oil product with granulated recycled tire rubber at temperatures of 375 to 500 degrees Fahrenheit and allowing the first mixture to cool to 275 to 400 degrees;

preparing a second mixture comprising water and clay at a temperature of 40 to 140 degrees; and

slowly adding the first mixture with the second mixture to form the emulsion at 100 to 210 degrees.

2. The method of claim 1 wherein the tall oil product comprises crude tall oil.

3. The method of claim 1 wherein the tall oil product comprises tall oil.

4. The method of claim 1 wherein the tall oil product comprises tall oil pitch.

5. The method of claim 1 wherein the tall oil product comprises a mixture of crude tall oil, tall oil and tall oil pitch.

6. The method of claim 1 wherein the clay comprises kaolinite.

7. The method of claim 1 wherein the clay comprises bentonite.

8. The method of claim 1 wherein the clay comprises magnesium silicate.

9. The method of claim 1 wherein the clay comprises a blend of kaolinite, bentonite and magnesium silicate.

10. The method of claim 1 wherein the first mixture further comprises a performance enhancing additive.

11. The method of claim 10 wherein the performance enhancing additive is selected from the group consisting of petroleum asphalt, petroleum base oils, reclaimed and recycled motor oils and fluxes, styrene butadiene - styrene coblock polymers, styrene isoprene - styrene coblock polymers, ethylene vinyl acetate polymers, polymer latex, manmade fiber and natural fiber.

12. The method of claim 10 wherein the performance enhancing additive is selected from any one or more of the group comprising petroleum asphalt, petroleum base oils, reclaimed and recycled motor oils and fluxes, styrene butadiene - styrene coblock polymers, styrene isoprene - styrene coblock polymers, ethylene vinyl acetate polymers, polymer latex, manmade fiber, and natural fiber.

13. The method of claim 1 wherein the second mixture further comprises a pH adjusting substance.

14. The method of claim 13 wherein the pH adjusting substance is selected from the group consisting of hydrochloric acid, citric acid, acetic acid, chromic acid, sodium chromate, sodium dichromate, potassium dichromate, aluminum chloride, ferric chloride, sodium hydroxide, sodium metasilicate pentahydrate, and sodium metasilicate nanohydrate.

15. The method of claim 13 wherein the pH adjusting substance is selected from any one or more of the group comprising hydrochloric acid, citric acid, acetic acid, chromic acid, sodium chromate, sodium dichromate, potassium dichromate, aluminum chloride, ferric chloride, sodium hydroxide, sodium metasilicate pentahydrate, and sodium metasilicate nanohydrate.

16. The method of claim 1 wherein the second mixture comprises a co-emulsifier.

17. The method of claim 16 wherein the co-emulsifier comprises a nonylphenol surfactant.

18. The method of claim 16 wherein the co-emulsifier comprises quaternary ammonium chloride.

19. The method of claim 1 wherein the emulsion further comprises an end use modifying additive.

20. The method of claim 19 wherein the end use modifying additive is selected from the group consisting of crushed and sieve sized mineral aggregates, crushed and sieve sized recycled asphalt pavement, crushed and sieve sized portland cement concrete, and sand.

21. The method of claim 19 wherein the end use modifying additive is selected from any one or more of the group comprising crushed and sieve sized mineral aggregates, crushed and sieve sized recycled asphalt pavement, crushed and sieve sized portland cement concrete, and sand.

22. The method of claim 1 wherein the granulated recycled tire rubber is minus 16 mesh to minus 80 mesh.

23. Synthetic asphalt produced according to the method of claim 1.

24. A method of preparing a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the method comprising:

preparing a first mixture of a synthetic asphalt-recycled tire rubber base by mixing together manmade asphaltene in a tall oil product with granulated recycled tire rubber at temperatures of 375 to 500 degrees Fahrenheit and allowing the first mixture to cool to 275 to 400 degrees;

preparing a second mixture comprising water and clay at a temperature of 40 to 140 degrees; and

blending the first mixture with the second mixture to form the emulsion at 100 to 210 degrees.

25. The method of claim 24 wherein the tall oil product comprises crude tall oil.

26. The method of claim 24 wherein the tall oil product comprises tall oil.

27. The method of claim 24 wherein the tall oil product comprises tall oil pitch.

28. The method of claim 24 wherein the tall oil product comprises a mixture of crude tall oil, tall oil and tall oil pitch.

29. The method of claim 24 wherein the clay comprises kaolinite.

30. The method of claim 24 wherein the clay comprises bentonite.

31. The method of claim 24 wherein the clay comprises magnesium silicate.

32. The method of claim 24 wherein the clay comprises a blend of kaolinite, bentonite and magnesium silicate.

33. The method of claim 24 wherein the first mixture further comprises a performance enhancing additive.

34. The method of claim 33 wherein the performance enhancing additive is selected from the group consisting of petroleum asphalt, petroleum base oils, reclaimed and recycled motor oils and fluxes, styrene butadiene - styrene coblock polymers, styrene isoprene - styrene

coblock polymers, ethylene vinyl acetate polymers, polymer latex, manmade fiber, and natural fiber.

35. The method of claim 33 wherein the performance enhancing additive is selected from any one or more of the group comprising petroleum asphalt, petroleum base oils, reclaimed and recycled motor oils and fluxes, styrene butadiene - styrene coblock polymers, styrene isoprene - styrene coblock polymers, ethylene vinyl acetate polymers, polymer latex, manmade fiber, and natural fiber.

36. The method of claim 24 wherein the second mixture further comprises a pH adjusting substance.

37. The method of claim 36 wherein the pH adjusting substance is selected from the group consisting of hydrochloric acid, citric acid, acetic acid, chromic acid, sodium chromate, sodium dichromate, potassium dichromate, aluminum chloride, ferric chloride, sodium hydroxide, sodium metasilicate pentahydrate, and sodium metasilicate nanohydrate.

38. The method of claim 36 wherein the pH adjusting substance is selected from any one or more of the group comprising hydrochloric acid, citric acid, acetic acid, chromic acid, sodium chromate, sodium dichromate, potassium dichromate, aluminum chloride, ferric chloride, sodium hydroxide, sodium metasilicate pentahydrate, and sodium metasilicate nanohydrate.

39. The method of claim 24 wherein the second mixture comprises a co-emulsifier.

40. The method of claim 39 wherein the co-emulsifier comprises a nonylphenol surfactant.

41. The method of claim 39 wherein the co-emulsifier comprises quaternary ammonium chloride.

42. The method of claim 24 wherein the emulsion further comprises an end use modifying additive.

43. The method of claim 42 wherein the end use modifying additive is selected from the group consisting of crushed and sieve sized mineral aggregates, crushed and sieve sized recycled asphalt pavement, crushed and sieve sized portland cement concrete, and sand.

44. The method of claim 42 wherein the end use modifying additive is selected from any one or more of the group comprising crushed and sieve sized mineral aggregates, crushed and

sieve sized recycled asphalt pavement, crushed and sieve sized portland cement concrete, and sand.

45. The method of claim 24 wherein the granulated recycled tire rubber is minus 16 mesh to minus 80 mesh.

46. Synthetic asphalt produced according to the method of claim 24.

47. A composition of a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the composition comprising:

a first mixture of a synthetic asphalt-recycled tire rubber base comprising 15% by weight gilsonite, 62 % by weight tall oil product and 20 % by weight granulated recycled tire rubber and 3 % by weight petroleum base lube oil, the first mixture blended with a second mixture, the second mixture comprising 46.38 % by weight water and 53.62 % by weight clay, wherein the blended first mixture and second mixture results in an emulsion comprising 47.9 % by weight water, 33.6 % by weight synthetic asphalt-tire rubber and 18.5 % clay.

48. A composition of a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the composition comprising:

a first mixture of a petroleum asphalt/synthetic asphalt-recycled tire rubber base comprising 65% by weight of PG 64-22 petroleum asphalt, 8% by weight gilsonite, 7.5% by weight tall oil pitch, 9.5% by weight recycled motor oil flux, and 10% by weight minus 30 mesh recycled tire rubber, the first mixture blended with a second mixture, the second mixture comprising 92.10% by weight water, 0.47% by weight sodium chromate, 3.48% by weight nonylphenol surfactant and 3.95 % by weight bentonite clay, wherein an additional 2.25% minus 30 mesh tire rubber and 2.05% cationic latex rubber is added to the blended first mixture and second mixture, resulting in an emulsion comprising 49.00 % by weight water, 0.25% by weight sodium chromate, 1.85% by weight nonylphenol surfactant, 2.10% by weight bentonite clay, 2.05% by weight cationic latex, 27.63% PG 64-22 petroleum asphalt, 3.19% by weight tall oil pitch, 3.40% by weight gilsonite,

4.03% by weight recycled motor oil flux, and 6.5% by weight minus 30 mesh recycled tire rubber.

49. A composition of a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the composition comprising:

a first mixture of a petroleum asphalt/synthetic asphalt-recycled tire rubber base comprising 86.9% by weight of PG 64-22 petroleum asphalt, 6.67% by weight gilsonite, 6.43% by weight tall oil pitch, the first mixture blended with a second mixture, the second mixture comprising 90.05% by weight water, 0.38% by weight aluminum chloride, 4.73% by weight nonylphenol surfactant and 4.84 % by weight bentonite clay, wherein additional minus 30 mesh tire rubber and cationic latex rubber are added to the blended first mixture and second mixture to form a stable mineral colloidal emulsion comprising 47.60 % by weight water, 0.20% by weight aluminum chloride, 2.50% by weight nonylphenol surfactant, 2.56% by weight bentonite clay, 1.00% by weight cationic latex, 39.47 % by weight synthetic asphalt modified with petroleum asphalt, and 6.67% by weight minus 30 mesh recycled tire rubber.

50. A composition of a synthetic asphalt recycled tire rubber emulsion which may be used as a crack-filler for asphalt and portland cement pavements, as a roof coating, slurry seal coating, or as a seal coat for asphalt pavements, the composition comprising:

a first mixture of a petroleum asphalt/synthetic asphalt-recycled tire rubber base comprising 86.9% by weight of PG 64-22 petroleum asphalt, 6.67% by weight gilsonite, 6.43% by weight tall oil pitch, the first mixture blended with a second mixture, the second mixture comprising 91.63% by weight water, 0.39% by weight ferric chloride, 1.95% by weight nonylphenol surfactant, 5.84 % by weight bentonite clay, and 0.19% by weight citric acid, wherein additional minus 30 mesh tire rubber and cationic styrene butadiene latex rubber are added to the blended first mixture and second mixture to form a uniform emulsion comprising 47.1 % by weight water, 0.20% by weight ferric chloride, 1.0% by weight nonylphenol surfactant, 3.0% by weight bentonite clay, 0.1% by weight citric acid, 40.0 % by weight synthetic asphalt modified with petroleum asphalt, 6.60%

by weight minus 30 mesh recycled tire rubber, and 2.0% by weight cationic butadiene latex rubber.